

REMARKS

Claims 1-11 are pending in the present application.

REJECTION UNDER 35 U.S.C. § 103

Claims 1, 2, 4 – 6 and 8 - 11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,742,600 to Nishihara in view of U.S. Patent No. 5,848,067 to Osawa et al. and either one of U.S. Patent No. 6,667,978 to Delp et al. and U.S. Patent No. 6,442,163 to Chopping. Claims 3 and 7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nishihara in view of Osawa, either one of Delp and Chopping, and U.S. Patent No. 6,061,820 to Nakakita et al. Applicants respectfully traverse the rejections.

In independent claims 1 and 11, Applicants disclose a system for controlling a bandwidth when receiving and reassembling a data stream structured in an AAL1 format. For example, as recited in independent claim 1:

1. A system for controlling a bandwidth when receiving and reassembling a consecutive data stream transferred while segmented by AAL1 format cells, comprising

an 8-cell buffer, in a data reassembly unit which reassembles received cells, for storing 8 cells of a cycle of a sequence count (SC) of 0 to 7 and sending the cells out to a later stage after a check unit of a sequence number (SN) field confirms normalcy of the cells and

a control unit for control so that the number of P format cells stored in said 8-cell buffer becomes 1 cell when 8 cells are stored in said 8-cell buffer.

Nishihara discloses a multiplex ATM/STM converter for structured data transmission (see, e.g., abstract of Nishihara). The Examiner points out that Nishihara discloses an AAL1 processor that is capable of storing ATM cells having a P-format bit (see, e.g., column 5, lines 10

– 12 of Nishihara). He acknowledges that Nishihara does not explicitly disclose Applicants' claimed normalcy checking, and asserts that this is made obvious by CRC checking disclosed by Osawa. He acknowledges that Nishihara and Osawa fail to disclose Applicants' claimed 8-cell buffer, and asserts that this is made obvious in view of 8-cell formats disclosed by Delp and Chopping.

However, in sharp contrast to the disclosures of Nishihara, Osawa, Delp and Chopping, Applicants' claimed invention in addition requires that the claimed control unit controls "the number of P format cells stored in said 8-cell buffer becomes 1 cell when 8 cells are stored in said 8-cell buffer ". In other words, in contrast to the disclosures of Nishihara, Osawa, Delp and Chopping, in addition to checking for abnormalities in the sequence of cells stored by the claimed buffer, Applicants invention as claimed in claim 1 further implements a processing algorithm by which certain abnormalities (i.e., an invalid number or positioning of P format cells in the sequence) may be corrected.

None of the cited references discloses or suggest a control unit providing such a correction. Accordingly, Applicants respectfully submit that claim 1 is not made obvious by the cited references, and is therefore allowable. As independent claim 11 requires essentially the same features of its claimed control unit as are required by independent claim 1, Applicants reapply the above arguments to submit that claim 11 is not made obvious by the cited references, and is therefore allowable.

In independent claim 6, Applicants disclose:

6. A system for controlling AAL1 cell bandwidth when reassembling a consecutive data stream having a frame structure transferred while segmented by cells of an AAL1 structured data transfer format, the system including

an internal frame counter made to run by itself and synchronized in frame phase by a boundary position of a frame set in a pointer field after confirming normalcy of a sequence number field of received cells and

said internal frame counter monitors the number of bytes of the received data and discards excess data when detecting that the boundary position of a frame is later than the period of the internal frame counter.

With respect to independent claim 6, the Examiner compares the claimed internal frame counter to frame counter 401 of Nishihara (see, e.g., FIG. 5 of Nishihara). At column 7, lines 40 – 47, frame counter 401 is described as follows:

Frame counter 401 monitors the output of CM section 106 by VP (by channel on the STM side) in 125 μ sec intervals, calculates frame length, multiplies by network CDV value n , which is set according to system, to calculate buffer threshold value $Th_{1,k}$ by VP (identifier k) (by channel on the STM side), and further, doubles this value to calculate the buffer length $Th_{2,k}$ by VP (by channel on the STM side).

Thus, Nishihara discloses a frame counter that is used to establish a buffer length at the time of buffer initialization. In sharp contrast, the frame counter of Applicants' independent claim 6 "monitors the number of bytes of the received data and discards excess data when detecting that the boundary position of a frame is later than the period of the internal frame counter". Applicants therefore submit that Nishihara and the other cited references fails to disclose or otherwise suggest the claimed features of Applicants' frame counter as claimed in independent claim 6, and that claim 6 is thereby allowable.

In independent claim 8, Applicants disclose:

8. A system for controlling AAL1 cell bandwidth when reassembling a consecutive data stream having a frame structure transferred while segmented by cells of an AAL1 structured data transfer format, the system including

a bandwidth adjusting unit for adjusting a data rate between transmitting and receiving ends after confirming normalcy of a sequence number field of a received cell and

said bandwidth adjusting unit has an internal frame counter made to run by itself and synchronized in frame phase by a boundary position of a frame set in a pointer field, and

said bandwidth adjusting unit adjusts the bandwidth by determination and control of a P/non-P format cell based on a CSI bit, sequence count (SC), flag for

discriminating a cell with an invalid sequence number (SN) field, result of detection of whether a P format cell already exists in one cycle between a sequence count of 0 and a currently received cell, and a result of discrimination of whether there is a boundary position between a received even number cell and the next odd number cell by said internal frame counter.

With respect to independent claim 8, the Examiner compares the internal frame counter of the claimed bandwidth adjusting unit to frame counter 401 of Nishihara. However, Applicants respectfully submit that, unlike Applicants' claimed bandwidth adjusting unit, frame counter 401 fails to meet Applicants' claim limitation requiring:

said bandwidth adjusting unit adjusts the bandwidth by determination and control of a P/non-P format cell based on a CSI bit, sequence count (SC), flag for discriminating a cell with an invalid sequence number (SN) field, result of detection of whether a P format cell already exists in one cycle between a sequence count of 0 and a currently received cell, and a result of discrimination of whether there is a boundary position between a received even number cell and the next odd number cell by said internal frame counter.

Applicants further submit that this limitation in addition is not disclosed or suggested by any of the other cited references, and that claim 8 is therefore allowable.

In summary, Applicants submit that independent claims 1, 6, 8 and 11 are not made obvious by Nishihara, Osawa, Delp and Chopping, either alone or in combination, and are therefore in condition for allowance. As dependent claims 2 – 5, 7, 9 and 10 each depend from one of allowable claims 1, 6 and 8, Applicants further submit that dependent claims 2 – 5, 7, 9 and 10 are allowable for at least this reason.

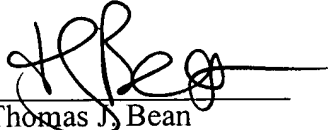
CONCLUSION

In view of the amendments and set forth above, Applicants respectfully submit that this application is in condition for allowance which action is respectfully requested. However, if for any reason the Examiner should consider this application not to be in condition for allowance,

the Examiner is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

Any fee due with this paper may be charged to Deposit Account No. 50-1290.

Respectfully submitted,



Thomas J. Bean
Reg. No. 44,5287

CUSTOMER NUMBER 026304
Katten Muchin Zavis Rosenman
575 Madison Avenue
New York, NY 10022-2585
(212) 940-8729
Docket No.: FUJA 18.217 (100794-11586)
TJB: pm